

CLAIMS

1. A power source device comprising:

a transformer having a first winding and a second winding;

an oscillator self-oscillating with using the first winding of the
5 transformer, and supplying an oscillating voltage to the first winding, the
transformer generating an alternating current (AC) voltage at the second
winding responsive to the oscillating voltage supplied from the first winding;

a rectifier for converting the AC voltage output from the second
winding into a direct current (DC) voltage, and outputting the DC voltage;

10 first and second output terminals for outputting the DC voltage
output from the rectifier; and

a diode connected between the first and second output terminals
of the rectifier so that a polarity of the diode is reverse to a polarity of the DC
voltage,

15 wherein the first and second output terminals are connected with
a load charged with an electric charge having a polarity reverse to the
polarity of the DC voltage.

2. The power source device according to claim 1, further comprising a
20 Zener diode connected between the diode and the rectifier.

3. The power source device according to claim 1, wherein the rectifier
comprises a voltage multiplier rectifier.

25 4. An apparatus comprising:

a load charged with an electric charge; and

a power source device including

a transformer having a first winding and a second winding,

an oscillator self-oscillating with using the first winding of the transformer, and supplying an oscillating voltage to the first winding, the transformer generating an alternating current (AC) voltage at the second winding responsive to the oscillating voltage supplied from the first winding,

a rectifier for converting the AC voltage output from the second winding into a direct current (DC) voltage, and outputting the DC voltage,

first and second output terminals for outputting the DC voltage output from the rectifier and connected to the load, and

a diode connected between the first and second output terminals of the rectifier so that a polarity of the diode is reverse to a polarity of the DC voltage,

wherein the electric charge of the load has a polarity reverse to the polarity of the DC voltage.

5. The apparatus according to claim 4, wherein the power source device further includes a Zener diode connected between the diode and the rectifier.

6. The apparatus according to claim 4, wherein the rectifier comprises a voltage multiplier rectifier.